



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/525,778	02/28/2005	Bruno Bozionek	2002P10504WOUS	8327

7590 04/14/2009
Siemens Corporation
Intellectual Property Department
170 Wood Avenue South
Iselin, NJ 08830

EXAMINER

SMITH, JOSHUA Y

ART UNIT	PAPER NUMBER
----------	--------------

2419

MAIL DATE	DELIVERY MODE
-----------	---------------

04/14/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/525,778	Applicant(s) BOZIOONEK ET AL.	
	Examiner JOSHUA SMITH	Art Unit 2419	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 January 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13-25 and 30-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13-25 and 30-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The amendment filed 01/29/2009 has been entered.

- **Claims 13-25 and 30-32 are pending.**
- **Claims 1-12 and 26-29 are previously cancelled.**
- **Claims 13-25 and 30-32 stand rejected.**

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. **Claims 13-25 and 30-32** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

3. **Claim 13** states “(ii) capable of forwarding the first signaling message without performing conversion of the signaling message to an internal signaling protocol of the network access device”. The specification does not adequately disclose how conversion is performed without an internal signaling protocol, in such a manner that one skilled in the art at the time of the invention could make and use the claimed invention.

Art Unit: 2419

4. **Claim 13** states “(iv) capable of converting the **entire** first signaling message to a different one of the multiple protocols” and “if the protocols are not the same, then converting the **entire** signaling message into the second signaling protocol” (emphasis added by examiner). The specification does not adequately disclose how conversion is performed such that an entire signaling message is converted, in such a manner that one of ordinary skill in the art at the time of the invention could make and use the claimed invention.

5. **Claim 13** states “transferring the converted signaling message to the second device by **tunneling the message through the network access device**” and “transferring the signaling message to the second device by **tunneling the message through the network access device without performing conversion of the signaling message to any internal signaling protocol** of the network access device” (emphasis added by examiner). The specification does not adequately disclose how “tunneling” is performed “through a network access device”, and the specification does not adequately disclose how tunneling is performed “without performing conversion” to an “internal signaling protocol”, in such a manner that one of ordinary skill in the art at the time of the invention could make and use the claimed invention.

6. **Claims 14-25** are rejected through dependence from Claim 13.

7. **Claim 14** states “transferring the signaling message from the first device to the network access device is effected by **tunneling the message through a third network**”

Art Unit: 2419

(emphasis added by examiner). The specification does not adequately disclose **how** “tunneling” is performed “through a third network”, in such a manner that one of ordinary skill in the art at the time of the invention could make and use the claimed invention.

8. **Claim 15** states “a transfer of voice data in a **private** data transfer network”

(emphasis added by examiner). The specification does not state the word “private”, and does not clearly present a network that is “private” in any way.

9. **Claim 25** states “the transfer of voice data is in an operating data packet”

(emphasis added by examiner). The specification does not adequately disclose **what** an “operating” data packet is, in such a manner that one of ordinary skill in the art at the time of the invention could make and use the claimed invention.

10. **Claim 30** states “(ii) capable of forwarding the signaling message from the first device without performing conversion of the signaling message to an internal signaling protocol of the network access device”. The specification does not adequately disclose **how** conversion is performed without an internal signaling protocol, in such a manner that one of ordinary skill in the art at the time of the invention could make and use the claimed invention.

11. **Claim 30** states “(iv) capable of converting the **entire** first signaling message to the second protocol” (emphasis added by examiner). The specification does not adequately disclose **how** conversion is performed such that an entire signaling

Art Unit: 2419

message is converted, in such a manner that one of ordinary skill in the art at the time of the invention could make and use the claimed invention.

12. **Claims 31 and 32** are rejected through dependence from Claim 30.

13. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

14. **Claims 13-25 and 30-32** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

15. **Claim 13** states “(ii) capable of forwarding the first signaling message **without performing conversion** of the signaling message **to an internal signaling protocol** of the network access device” (emphasis added by examiner). This is indefinite since it is unclear how conversion is performed without an internal signaling protocol. Examiner will treat the above excerpt to simply indicate that a conversion is performed in the absence of any internal protocol.

16. **Claim 13** states “(iii) capable of forwarding the first signaling message **without conversion to a different one of the multiple protocols**” (emphasis added by examiner). This is indefinite since it is unclear that the excerpt is indicating either ***forwarding to a different protocol without conversion, or forwarding to an identical protocol***. Examiner will treat the above excerpt to indicate ***(iii) capable of forwarding the first signaling message to said second signaling device and where***

Art Unit: 2419

said forwarding does not require conversion to a different one of the multiple protocols.

17. **Claim 13** states “(iv) capable of converting the **entire** first signaling message to a different one of the multiple protocols” and “if the protocols are not the same, then converting the **entire** signaling message into the second signaling protocol” (emphasis added by examiner). This is indefinite since it is unclear how conversion is performed such that an entire signaling message is converted. Examiner will treat the above excerpt to simply indicate that a message is converted from operation in one protocol to operation in another protocol, and where messages utilized in each protocol are not operationally interchangeable.

18. **Claim 13** states “transferring the converted signaling message to the second device by **tunneling the message through the network access device**” and “transferring the signaling message to the second device by **tunneling the message through the network access device without performing conversion of the signaling message to any internal signaling protocol** of the network access device” (emphasis added by examiner). This is indefinite since it is unclear how “tunneling” is performed “through a network access device”, and it is unclear how tunneling is performed “without performing conversion” to an “internal signaling protocol”. Examiner will treat the above first excerpt to indicate that a tunnel is established through a network access device, and examiner will treat the above second excerpt to indicate an absence of any conversion to an internal protocol as a message is sent through a network access device.

19. **Claims 14-25** are rejected through dependence from Claim 13.

20. **Claim 14** states “transferring the signaling message from the first device to the network access device is effected by **tunneling** the message **through a third network**” (emphasis added by examiner). This is indefinite since it is unclear how “tunneling” is performed “through a third network”. Examiner will treat the above excerpt to indicate that a tunnel is established through a third network for the communication of data units.

21. **Claim 20** recites the limitation "the group" in the second line of Claim 20. There is insufficient antecedent basis for this limitation in the claim.

22. **Claim 24** states “the signaling message relates to a transfer of voice data **and/or** to the performance of additional service features for the transfer of voice data” (emphasis added by examiner). This is indefinite since it is unclear whether both the first set of limitations and the second set limitations are required, or either the first set of limitations or the second set of limitations is required. Examiner will treat the above excerpt to indicate that either the first set of limitations or the second set of limitations is required.

23. **Claim 25** states “the transfer of voice data is in an operating data packet” (emphasis added by examiner). This is indefinite since it is unclear what an “operating”

Art Unit: 2419

data packet is. Examiner will treat an “operating data packet” as a data packet that is involved in the operation of a network connection.

24. **Claim 30** states “(ii) capable of forwarding the signaling message from the first device without performing conversion of the signaling message to an internal signaling protocol of the network access device”. This is indefinite since it is unclear how conversion is performed without an internal signaling protocol. Examiner will treat the above excerpt to simply indicate that a conversion is performed in the absence of any internal protocol.

25. **Claim 30** states “(iv) capable of converting the **entire** first signaling message to the second protocol” (emphasis added by examiner). This is indefinite since it is unclear how conversion is performed such that an entire signaling message is converted. Examiner will treat the above excerpt to simply indicate that a message is converted from operation in one protocol to operation in another protocol, and where messages utilized in each protocol are not operationally interchangeable.

26. **Claims 31 and 32** are rejected through dependence from Claim 30.

Claim Rejections - 35 USC § 103

27. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

Art Unit: 2419

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

28. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

29. **Claims 13, 15-19, 21, 23 and 24** are rejected under 35 U.S.C. 103(a) as being unpatentable over Mayeul et al. (Document Number: EP 0 926 909 A2) in view of ITU-T ("H.323 Annex M.1 Tunnelling of signaling protocols (QSIG) in H.323", 11/2000, International Telecommunication Union, pages 3, 6, and 7) and Arai (Pub. No.: US 2004/0032881 A1), hereafter respectively referred to as Mayeul, ITU-T reference, and Arai.

30. **In regard to Claim 13**, Mayeul teaches in paragraph [0029], and in Fig. 7, a node 11 (Fig. 7) sends a SETUP message (generating a first signaling message from a first device according to a first protocol and comprising instructions for setting up a connection between a first signaling device and a second signaling device in a different network) to node 22 (Fig. 7), and as a served user subscribes to CFU/CFB, node 22 sends a SETUP message for a supplementary service CFU/CFB to a diverted-to user associated with node 31 (Fig. 7) (forwarding a signaling message of a type used to establish a communication connection between devices present in two or more communication networks), and a SETUP message to node 31 originating at node 22

Art Unit: 2419

includes an IV operation identifier as expected by node 31, and node 31 sends an ALERTING message to node 11 via node 22 using an IV operation identifier, and when this message is received at node 22 (Fig. 7) it extracts the operation identifier (IV) and determines that it is incorrect for further transmission to node 11 (Fig. 7) and determines that an OI operation identifier is required and makes an appropriate conversion before transmitting the ALERTING message to node 11 (communication between different devices in different networks may require conversion between signaling connection protocols in order to establish a connection), and the remaining parts of the CFU/CFB procedure continue (forwarding a signaling message of a type used to establish a communication connection between devices present in two or more communication networks wherein communication between different devices in different networks may require conversion between signaling connection protocols in order to establish a connection, generating a first signaling message from a first device according to a first protocol and comprising instructions for setting up a connection between a first signaling device and a second signaling device in a different network).

31. Mayeul teaches in paragraphs [0007], [0009] and [0021], and in Fig. 3 and Fig. 4, nodes 11 and 41 (Fig. 4) are described with reference to Fig. 3, where a call between user 10 and 40 involving SS1 is successful, and node 11 uses OI for SS1 in a direction of node 21, node 21 passes this on in a transparent way to node 41 which expects OI for SS1 ((iii) capable of forwarding a first signaling message without conversion to a different one of multiple protocols, if a first signal protocol of a first device and a second signaling protocol supported by a second device are the same, then transferring a

Art Unit: 2419

signaling message to a second device through a network access device without performing conversion of a signaling message to any internal signaling protocol of a network access device).

32. Mayeul teaches in paragraph [0023], and in Fig. 4, a conversion is made at intermediate node 22 (Fig. 4) (a network access device) depending upon a remote capability of a next remote node for a supplementary service involved, and when sending supplementary service 1 (SS1) information (capable of receiving and processing signaling messages) from node 11 to node 31 (Fig. 4) (connecting a first and second networks via a network access device, transferring a signaling message from a first device to a network access device), intermediate node 22 (Fig. 4) changes an operation identifier received (OI convention) from node 11 into an IV convention required by node 31 (Fig. 4) (multiple different protocols, determining if a first signal protocol and a second signaling protocol supported by a second device are a same protocol, a determination made by a network access device and based on a target datum in a first signaling message, and if the protocols are not the same then converting a signaling message into a second signaling protocol, transferring a converted signaling message to a second device through a network access device), whereas a reverse conversion is done for SS2, i.e. IV to OI for a transmission from node 11 to node 31, and, hence, a new function of node 22 is not just that of a protocol converter (capable of converting an entire first signaling message to a different one of multiple protocols before forwarding) or gateway switch between differing systems, but is an enhanced protocol converter which converts particular aspects of a messaging

Art Unit: 2419

protocol, in particular **at least** a part of an information element (capable of converting an entire first signaling message to a different one of multiple protocols before forwarding) (providing a network access device (i) capable of receiving and processing signaling messages of multiple different protocols, including a first protocol, and (ii) capable of forwarding a first signaling message without performing conversion of a signaling message to an internal signaling protocol of a network access device, and (iv) capable of converting an entire first signaling message to a different one of multiple protocols before forwarding, and connecting a first and second networks via a network access device, and transferring a signaling message from a first device to a network access device, and determining if a first signal protocol and a second signaling protocol supported by a second device are a same protocol, and a determination made by a network access device and based on a target datum in a first signaling message, and if the protocols are not the same then converting a signaling message into a second signaling protocol, transferring a converted signaling message to a second device through a network access device).

33. Mayeul fails to teach transferring a signaling message to a second device by tunneling a message through a network access device, and transferring a signaling message to a second device by tunneling a message through a network access device without performing conversion of a signaling message to any internal signaling protocol of a network access device.

34. The ITU-T reference teaches in pages 3 and 6-7, tunneling QSIG over H.323 networks, and where H.225.0 messages tunnel an entire QSIG message unchanged,

Art Unit: 2419

and since the binary encoding of QSIG messages is what is tunneled, the integrity of QSIG messages is fully preserved, and a single QSIG call can be tunneled in a signal H.323 call, and a gatekeeper participating in a call where QSIG tunneling is used between endpoints should pass along tunneled QSIG messages unchanged (transferring a signaling message to a second device by tunneling a message through a network access device, and transferring a signaling message to a second device by tunneling a message through a network access device without performing conversion of a signaling message to any internal signaling protocol of a network access device).

35. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine teachings of the ITU-T reference with the invention of Mayeul since the ITU-T reference provides a system of signaling over a H.323 network, which can be introduced into the system of Mayeul to allow telephones calls to be connected through H.323 networks and expand on the conversion capabilities of the system of Mayeul to include H.323 networks and provide services to users connected in H.323 networks.

36. Mayeul fails to explicitly teach converting an entire first signaling message to a different one of multiple protocols before forwarding, and converting an entire message into a second protocol.

37. Arai teaches in paragraphs [0019] and [0020], and in FIG. 2, requests and responses are communicated using application layer protocols 211 and 212 (FIG. 2), and since all nodes use common network protocol layers, a converter node translates between the two application layer protocols, where request messages from a requesting

Art Unit: 2419

node 201 (FIG. 2) to the application node 203 (FIG. 2) are forwarded to the converter node 202 (FIG. 2) by a protocol dispatcher, and the converter node 202 converts message from protocol 211 to protocol 212 (FIG. 2) (converting an entire first signaling message to a different one of multiple protocols before forwarding, and converting an entire message into a second protocol), and sends the converted message back to the application node, and the application node sends response message to the converter node, where the messages are translated, send back to the application node, where they can be sent on to the requesting node 201 (FIG. 2) (converting an entire first signaling message to a different one of multiple protocols before forwarding, and converting an entire message into a second protocol). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of Arai with the invention of Mayeul since Arai provides a system of converting between application layer protocols, building on the converting capabilities of the system of Mayeul and allowing connections between communication devices that operate using differing application layer protocols in the system of Mayeul.

38. **In regard to Claims 15 and 16**, as discussed in the rejection of Claim 13, Mayeul in view of the ITU-T reference and Arai teaches a network access device performs functions of a telecommunication device, which serves for a switching of a connection for a transfer of data.

39. Mayeul teaches in paragraphs [0020] and [0021], and in FIG. 4, a conventional wireline telephone system, and that networks 5, 6, and 7 may be private

Art Unit: 2419

telecommunications networks (transfer of voice data in a private data transfer network, a network access device switches a connection that transfers voice data in a private data transfer network).

40. **In regard to Claim 17**, as discussed in the rejection of Claim 13, Mayeul in view of the ITU-T reference and Arai teaches a data transfer network.

41. Mayeul fails to teach a data transfer network functions according to the internet protocol.

42. Arai teaches in paragraphs [0005] and [0016], and in FIG. 2 and FIG. 4, network layers 402 (FIG. 4) can include internet (IP), and in a network arrangement 200 (FIG. 2) each node has a unique associated network (IP) address (a data transfer network functions according to the internet protocol). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of Arai with the invention of Mayeul since Arai provides a system of converting between application layer protocols, building on the converting capabilities of the system of Mayeul and allowing connections between communication devices that operate using differing application layer protocols in the system of Mayeul.

43. **In regard to Claim 18**, as discussed in the rejection of Claim 13, Mayeul in view of the ITU-T reference and Arai teaches a network access device performs a network access function for a plurality of terminal devices.

Art Unit: 2419

44. Mayeul teaches in paragraph [0020], local area networks (LAN) (terminal devices of a local data network).

45. **In regard to Claim 19**, Mayeul teaches in paragraph [0023], and in Fig. 4, a conversion is made at intermediate node 22 (Fig. 4) (a network access device, a central device) depending upon a remote capability of a next remote node for a supplementary service involved, and when sending supplementary service 1 (SS1) information (capable of receiving and processing signaling messages) from node 11 to node 31 (Fig. 4), intermediate node 22 (Fig. 4) changes an operation identifier received (OI convention) from node 11 into an IV convention required by node 31 (Fig. 4), whereas a reverse conversion is done for SS2, i.e. IV to OI for a transmission from node 11 to node 31, and, hence, a new function of node 22 is not just that of a protocol converter or gateway switch between differing systems, but is an enhanced protocol converter which converts particular aspects of a messaging protocol, and Mayeul teaches in paragraph [0020], local area networks (LAN) (terminal devices of a local data network), and Mayeul teaches in paragraphs [0020] and [0021], and in FIG. 4, a conventional wireline telephone system, and that networks 5, 6, and 7 may be private telecommunications networks (a network access device performs a network access function for a central device of a plurality of local data transfer networks, a central device performs services for a plurality of terminal devices of a data transfer network).

Art Unit: 2419

46. **In regard to Claim 21**, Mayeul teaches in paragraph [0029], and in Fig. 7, a node 11 (Fig. 7) sends a SETUP message to node 22 (Fig. 7), and as a served user subscribes to CFU/CFB, node 22 sends a SETUP message for a supplementary service CFU/CFB to a diverted-to user associated with node 31 (Fig. 7), and a SETUP message to node 31 originating at node 22 includes an IV operation identifier as expected by node 31, and node 31 sends an ALERTING message to node 11 via node 22 using an IV operation identifier, and when this message is received at node 22 (Fig. 7) it extracts the operation identifier (IV) and determines that it is incorrect for further transmission to node 11 (Fig. 7) (reading a target datum with an access function that reads target data of various signaling protocols, and determining a first signaling protocol of a received signaling message) and determines that an OI operation identifier is required and makes an appropriate conversion before transmitting the ALERTING message to node 11 (reading a target datum with an access function that reads target data of various signaling protocols, and determining a first signaling protocol of a received signaling message).

47. **In regard to Claim 23**, Mayeul teaches in paragraph [0029], and in Fig. 7, a node 11 (Fig. 7) sends a SETUP message to node 22 (Fig. 7), and as a served user subscribes to CFU/CFB, node 22 sends a SETUP message for a supplementary service CFU/CFB to a diverted-to user associated with node 31 (Fig. 7), and a SETUP message to node 31 originating at node 22 includes an IV operation identifier as expected by node 31, and node 31 sends an ALERTING message to node 11 via node 22 using an

Art Unit: 2419

IV operation identifier, and when this message is received at node 22 (Fig. 7) it extracts the operation identifier (IV) (storing a first message in a first protocol in a storage device) and determines that it is incorrect for further transmission to node 11 (Fig. 7) and determines that an OI operation identifier is required and makes an appropriate conversion (deciding if a protocol conversion is required after a storage step) before transmitting the ALERTING message to node 11 (storing a first message in a first protocol in a storage device, deciding if a protocol conversion is required after a storage step).

48. **In regard to Claim 24**, as discussed in the rejection of Claim 13, Mayeul in view of the ITU-T reference and Arai teaches a signaling message.

49. Mayeul teaches in paragraphs [0020] and [0021], and in FIG. 4, a conventional wireline telephone system, and that networks 5, 6, and 7 may be private telecommunications networks (a message relates to transfer of voice data).

50. **Claims 14 and 25** are rejected under 35 U.S.C. 103(a) as being unpatentable over Mayeul in view of the ITU-T reference, Arai, and further in view of Roch et al. (Pub. No.: US 2005/0088977 A1), hereafter referred to as Roch.

51. **In regard to Claim 14**, as discussed in the rejection of Claim 13, Mayeul in view of the ITU-T reference and Arai teaches a protocol conversion handled by a network access device, transferring a signaling message from a first device to a network access device, and a tunnel.

Art Unit: 2419

52. Mayeul fails to teach tunneling a message through a third network.

53. Roch teaches in paragraphs [0027] and [0034], and in FIG. 1 and FIG. 2, a network 2 (FIG. 1) (a third network), which may be the public internet, generally comprises a network core 4 (FIG. 1) through which a VPN tunnel 6 (FIG. 1) may be mapped between a pair of VPN gateway nodes 8a and 8b (FIG. 1), and a pair of private domains 10a,10b (FIG. 1) are connected to respective ones of the VPN gateways 8a (FIG. 1) (network access device) and 8b (FIG. 1) via a respective network interface unit 12a,12b (FIG. 1), and, thus, secure IP traffic may be routed through the VPN tunnel 6 (FIG. 1) between the private domains 10a,10b (FIG. 1) via the network interface units 12a,12b (FIG. 1) and the VPN gateways 8a (FIG. 1) (network access device) and 8b (FIG. 1), where a VPN gateway 8a (FIG. 1 and FIG. 2) processes IP traffic through a VPN tunnel 6 (FIG. 1), and labeled in FIG. 2 as **“VPN Tunnel Traffic with NEW QoS”** (transferring a message from a first device to a network access device is effected by tunneling a message through a third network).

54. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of Roch with the invention of Mayeul since Roch teaches provides a method that enables cost-effective use of a secure VPN tunnel by providing dynamic QoS where a VPN tunnel may be changed, at the discretion of either the customer or the service provider, without tearing down and re-establishing a VPN tunnel (see Roch, paragraphs [0010] and [0011]), which can be introduced into the system of Mayeul to allow secure connections through the networks in the system of Mayeul and provide security to users of the LAN's.

55. **In regard to Claim 25**, as discussed in the rejection of Claim 13, Mayeul in view of the ITU-T reference and Arai teaches a protocol conversion handled by a network access device, transferring a signaling message from a first device to a network access device, and a tunnel.

56. Mayeul fails to explicitly teach a transfer of voice data is in an operating data packet.

57. Roch teaches in paragraphs [0008] and [0009], while connected to enterprise LAN, a remote client may wish to open a voice over IP (VoIP) or a multimedia session through a tunnel (a transfer of voice data is in an operating data packet).

58. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of Roch with the invention of Mayeul since Roch teaches provides a method that enables cost-effective use of a secure VPN tunnel by providing dynamic QoS where a VPN tunnel may be changed, at the discretion of either the customer or the service provider, without tearing down and re-establishing a VPN tunnel (see Roch, paragraphs [0010] and [0011]), which can be introduced into the system of Mayeul to allow secure connections through the networks in the system of Mayeul and provide security to users of the LAN's.

59. **Claims 20 and 22** are rejected under 35 U.S.C. 103(a) as being unpatentable over Mayeul in view of the ITU-T reference, Arai, and further in view of Nilsen (Patent No.: US 7,136,372 B1), hereafter referred to as Nilsen.

Art Unit: 2419

60. **In regard to Claim 20**, as discussed in the rejection of Claim 13, Mayeul in view of the ITU-T reference and Arai teaches multiple different signaling protocols and one signaling protocol selected.

61. Mayeul fails to teach a group consisting of SIP, H.323, QSIG, SIP based, H.323 based, QSIG based, and a combination.

62. Nilsen teaches in column 4, lines 36-39, and in column 5, lines 44-48, a QSIG access-node would translate call and connection control messages into the H.323 format, but would tunnel the QSIG messages inside HTTP messages and address these to the service node, and extensions for supporting a SIP Protocol, where a SIP protocol builds on using a HTTP protocol and can be integrated into a system solution relatively simple if an application server supports call-from-the-blue services (a group consisting of SIP, H.323, QSIG, SIP based, H.323 based, QSIG based, and a combination).

63. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of Nilsen with the invention of Mayeul since Nilsen provides a system with an open service control protocol allowing support of access specific protocols and services while also allowing the respective access networks to share the same access nodes and service architectures (see Nilsen, column 2, lines 10-34), which can be incorporated into the system of Mayeul to build on the conversion between protocols and expand on providing different services to communication connections in the system of Mayeul.

Art Unit: 2419

64. **In regard to Claim 22**, Mayeul teaches in paragraphs [0007], [0009] and [0021], and in Fig. 3 and Fig. 4, nodes 11 and 41 (Fig. 4) are described with reference to Fig. 3, where a call between user 10 and 40 involving SS1 is successful, and node 11 uses OI for SS1 in a direction of node 21, node 21 passes this on in a transparent way to node 41 which expects OI for SS1 (no protocol conversion is required if a first and second signaling protocols are in a same protocol family).

65. **Claims 30 and 32** are rejected under 35 U.S.C. 103(a) as being unpatentable over Mayeul in view of Arai.

66. **In regard to Claim 30**, Mayeul teaches in paragraph [0027], and in Fig. 6, a processor 230 (Fig. 6) (a control device for evaluating signaling message and determining a second terminal device, a compare device) determines from a remote capabilities table 234 (Fig. 6) (a storage device) that Trunk 2 (leading to a next node) requires an object identifier (OI) for SS2, and consulting table 232 (Fig. 6) a processor 230 determines that SS2 with an object identifier requires an identifier "OIcode 2" (a compare device that compares a first signaling protocol of a signaling message received from a first device and a second signaling protocol supported by a second device) (a control device for evaluating signaling message and determining a second terminal device, a compare device that compares a first signaling protocol of a signaling message received from a first device and a second signaling protocol supported by a second device).

Art Unit: 2419

67. Mayeul teaches in paragraph [0029], and in Fig. 7, a node 11 (Fig. 7) sends a SETUP message to node 22 (Fig. 7) (a transfer device, a network access device), and as a served user subscribes to CFU/CFB, node 22 sends a SETUP message for a supplementary service CFU/CFB to a diverted-to user associated with node 31 (Fig. 7) (transferring a signaling message to a second device, a device configured to establish a connection between a first and second devices), and a SETUP message to node 31 originating at node 22 includes an IV operation identifier as expected by node 31 (configured to establish a connection between a first and second devices), and node 31 sends an ALERTING message to node 11 via node 22 using an IV operation identifier, and when this message is received at node 22 (Fig. 7) it extracts the operation identifier (IV) and determines that it is incorrect for further transmission to node 11 (Fig. 7) and determines that an OI operation identifier is required and makes an appropriate conversion before transmitting the ALERTING message to node 11, and the remaining parts of the CFU/CFB procedure continue (a transfer device that transfers a signaling message to a second device, a network access device configured to establish a connection between a first and second devices).

68. Mayeul teaches in paragraphs [0007], [0009] and [0021], and in Fig. 3 and Fig. 4, nodes 11 and 41 (Fig. 4) are described with reference to Fig. 3, where a call between user 10 and 40 involving SS1 is successful, and node 11 uses OI for SS1 in a direction of node 21, node 21 passes this on in a transparent way to node 41 which expects OI for SS1 ((iii) capable of forwarding a first signaling message without conversion to a different one of multiple protocols).

Art Unit: 2419

69. Mayeul teaches in paragraph [0023], and in Fig. 4, a conversion is made at intermediate node 22 (Fig. 4) (a network access device) depending upon a remote capability of a next remote node for a supplementary service involved, and when sending supplementary service 1 (SS1) information (capable of receiving and processing signaling messages) from node 11 to node 31 (Fig. 4) (connecting a first and second networks via a network access device, transferring a signaling message from a first device to a network access device), intermediate node 22 (Fig. 4) changes an operation identifier received (OI convention) from node 11 into an IV convention required by node 31 (Fig. 4) (multiple different protocols, determining if a first signal protocol and a second signaling protocol supported by a second device are a same protocol, a determination made by a network access device and based on a target datum in a first signaling message, and if the protocols are not the same then converting a signaling message into a second signaling protocol, transferring a converted signaling message to a second device through a network access device), whereas a reverse conversion is done for SS2, i.e. IV to OI for a transmission from node 11 to node 31, and, hence, a new function of node 22 is not just that of a protocol converter (capable of converting an entire first signaling message to a second protocol if a second protocol is supported by a second device before forwarding to a second device) or gateway switch between differing systems, but is an enhanced protocol converter which converts particular aspects of a messaging protocol, in particular **at least** a part of an information element (capable of converting an entire first signaling message to a second protocol if a second protocol is supported by a second device

Art Unit: 2419

before forwarding to a second device) ((i) receiving and processing signaling messages of multiple different protocols, including a first and second protocols, and (ii) capable of forwarding a first signaling message without performing conversion of a signaling message to an internal signaling protocol of a network access device, and (iv) capable of converting an entire first signaling message to a second protocol if a second protocol is supported by a second device before forwarding to a second device).

70. Mayeul fails to explicitly teach capable of converting an entire first signaling message to a second protocol if a second protocol is supported by a second device before forwarding to a second device.

71. Arai teaches in paragraphs [0019] and [0020], and in FIG. 2, requests and responses are communicated using application layer protocols 211 and 212 (FIG. 2), and since all nodes use common network protocol layers, a converter node translates between the two application layer protocols, where request messages from a requesting node 201 (FIG. 2) to the application node 203 (FIG. 2) are forwarded to the converter node 202 (FIG. 2) by a protocol dispatcher, and the converter node 202 converts message from protocol 211 to protocol 212 (FIG. 2) (converting an entire first signaling message to a second protocol if a second protocol is supported by a second device before forwarding to a second device), and sends the converted message back to the application node, and the application node sends response message to the converter node, where the messages are translated, send back to the application node, where they can be sent on to the requesting node 201 (FIG. 2) (capable of converting an entire first signaling message to a second protocol if a second protocol is supported by a

Art Unit: 2419

second device before forwarding to a second device). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of Arai with the invention of Mayeul since Arai provides a system of converting between application layer protocols, building on the converting capabilities of the system of Mayeul and allowing connections between communication devices that operate using differing application layer protocols in the system of Mayeul.

72. **In regard to Claim 32**, Mayeul teaches in paragraph [0029], and in Fig. 7, a node 11 (Fig. 7) sends a SETUP message to node 22 (Fig. 7) (a transfer device, a network access device), and as a served user subscribes to CFU/CFB, node 22 sends a SETUP message for a supplementary service CFU/CFB to a diverted-to user associated with node 31 (Fig. 7), and a SETUP message to node 31 originating at node 22 includes an IV operation identifier as expected by node 31, and node 31 sends an ALERTING message to node 11 via node 22 using an IV operation identifier, and when this message is received at node 22 (Fig. 7) it extracts the operation identifier (IV) and determines that it is incorrect for further transmission to node 11 (Fig. 7) and determines that an OI operation identifier is required and makes an appropriate conversion before transmitting the ALERTING message to node 11, and the remaining parts of the CFU/CFB procedure continue (a conversion device that converts a signaling message embodied according to a first signaling protocol to a second signaling message protocol).

Art Unit: 2419

73. **Claim 31** is rejected under 35 U.S.C. 103(a) as being unpatentable over Mayeul in view of Arai, and further in view of Chang et al. (Pub. No.: US 2002/0041576 A1), hereafter referred to as Chang.

74. **In regard to Claim 31**, as discussed in the rejection of Claim 30, Mayeul in view of the ITU-T reference and Arai teaches a network access device.

75. Mayeul teaches in paragraph [0027], and in Fig. 6, a processor 230 (Fig. 6) determines from a remote capabilities table 234 (Fig. 6) (a storage device) that Trunk 2 (leading to a next node) (a server) requires an object identifier (OI) for SS2 (an association between a protocol and a server), and consulting table 232 (Fig. 6) a processor 230 determines that SS2 with an object identifier requires an identifier "Oicode 2" (an interfaces that accesses a storage device, a storage device comprising an association between a protocol and a server).

76. Mayeul fails to teach a storage device comprising an association between a terminal and a server.

77. Chang teaches in claim 20, base station controllers each store an identifier of a given mobile station (a terminal device) and an identifier of a source base station controller (a server) in a pointer lookup table (a storage device) (a storage device comprising an association between a terminal and a server).

78. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of Chang with the invention of Mayeul since Chang provides a method for effectively embodying a packet data service without a separate device and modification of the radio interface standard in a wireless packet data system

Art Unit: 2419

(see Chang, paragraph [0014]), which can be introduced into the system of Mayeul to allow a mobile phone (wireless) links to be efficiently established without heavily modifying the system of Mayeul and allowing the system to efficiently provide wireless services.

Response to Arguments

I. Arguments for Claim Rejection under 35 USC § 103

79. Applicant's arguments filed 01/29/2009 have been fully considered but they are not persuasive. Applicants submit that the signaling messages of Applicants are forwarded without conversion to another signaling protocol, that is, without conversion to another signaling protocol means that no conversion to an internal signaling protocol of the device used for the forwarding is carried out, and there is no support for such an arrangement in the prior art. Examiner respectfully disagrees this is sufficient for the withdrawal of the rejections of Applicants' claims. The Mayeul reference does not teach any internal signaling protocol, and does not suggest any conversion to any protocol that is utilized exclusively within a node. As a result, Mayeul teaches forwarding a message without conversion to an internal signaling protocol. Examiner respectfully notes that, as discussed in the rejection of Claim 1, Mayeul also teaches forwarding a message without performing any type of conversion when a source node and a destination node utilize the same protocol and conversion is not needed.

80. Applicants also submit that another attribute of Applicants' network access device is that the first and second networks are connected via the network access

Art Unit: 2419

device. Examiner respectfully disagrees this is sufficient for the withdrawal of the rejections of Applicants' claims. As discussed in the rejection of Claim 1, Mayeul teaches a node 22 that forwards messages between a node 11 and a node 31, and this is done through respective networks 5 and 8.

81. Applicant's other arguments with respect to claims 13-25 and 30-32 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOSHUA SMITH whose telephone number is (571)270-1826. The examiner can normally be reached on Monday-Thursday 9:30am-7pm, Alternating Fridays 9:30am-6pm, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on 571-272-3088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2419

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Joshua Smith
/J.S./
Patent Examiner
03 April 2009

/Hassan Kizou/
Supervisory Patent Examiner, Art Unit 2419